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DATE: 15 August 2005

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SUBJECT: RESPONSE TO REVIEW OF ANNUAL MONITORING REPORT – CALIFORNIA RICE COMMISSION (CRC)

On April 1st 2005, I received and subsequently reviewed the *California Rice Commission's* Annual Monitoring Report (AMR) submitted in compliance with the requirements of Resolution No. R5-2003-0105 *Conditional Waiver of Waster Discharge Requirements for Discharges from Irrigated Lands and* Monitoring and Reporting Program Order No. R5-2004-0839.

The CRC first AMR submittal met the deadline for Coalition Group submittal, however based on their rice specific MRP future submittals of the CRC AMR are due on **December 31** annually. Review of the AMR confirmed that the CRC monitored at the locations and performed the analyses of constituents outlined in their MRPP and key components of the report (data, lab sheets, etc) were complete.

Toxicity tests

The CRC conducted toxicity tests as required under their MRP for three species for their September and October 2004 sampling events. At the three sites where toxicity was found no re-sampling or TIEs were conducted.

Pesticides

During September and October 2004, the CRC conducted water column monitoring for two pyrethroid pesticides: lambda cyhalothrin and zeta-cyerpmethrin. Results showed non-detect for all locations and dates, thus no follow-up was required. Though results were non-detect, the laboratory reported low matrix spike recoveries for both October 2004 samples. Samples were re-run (outside of hold time) and recovery levels for spikes and surrogates were within control limits and results were again non-detect. In cases where quality control is not met, the CRC must obtain an Exception Report from the laboratory and, as was done in October 2004, sufficient initial sample volume should be collected so that the lab can re-run the samples.

2004 cypermethrin results reported a non-detect level of 0.008 µg/l. Though this level may be lower than LC_{50} data reviewed in the CRC's MRPP, it is above the California Department of Fish and Game Interim Water Quality Criteria - Freshwater Aquatic Life Protection (1-Hour Average) of 0.002 µg/l. The

CRC MRP states "Quantification limits must be lower than LC50 of the most sensitive freshwater aquatic species or other applicable federal or state toxic or risk limits." All future cypermethrin samples should be analyzed using a detection limit at or below 0.002 µg/l.

General Parameters

In a meeting with the CRC on June 9, Regional Board staff clarified that water quality exceedance notification requirements include any constituent that exceeds a water quality objective and is not limited to toxicity. Dissolved Oxygen (DO) and pH levels detected during 2004 were outside of Basin Plan ranges on several occasions as detailed in **Table 1**. These exceedances required Regional Board notification and communications reports, however these were not submitted by the CRC.

Due to malfunctions in flow measurement equipment, the CRC employed an alternative float method during the two sample events in 2004. Staff notified the CRC in late April 2005 that the float method for measuring flow is no longer acceptable due to the large discrepancy between DWR flow gauge results and the float method in the 2004 monitoring results. As part of the AMR review, Staff requested that the CRC submit results for the first sampling event where the flow meter is used. This data was submitted by the CRC as requested and the CRC has subsequently purchased a new flow measurement device that is currently used for all sampling.

Quality Control Findings

The AMR included two sampling events (September and October 2004), neither of which required collection of field controls based on the procedure in the approved QAPP. Following a preliminary review of the AMR in May, staff requested early submittal (as soon as available) of the Irrigation Event 1 results including equipment blank, field duplicates, and matrix spike samples to confirm compliance with field quality control requirements. Staff has yet to receive a response to this request.

TIE/Re-sampling and Other Follow-up

Review of the AMR found that there was insufficient follow-up when algae toxicity was detected in 2004. When the CRC detected algae growth reduction in September 2004 (**Table 1**), the CRC provided phone notification that toxicity had occurred as well as a follow-up email and a meeting was held to discuss the issue with staff. Though aware of the toxicity incident, neither re-sampling to determine persistent of toxicity nor a TIE to determine the cause of the toxicity was conducted. Algae toxicity was again observed in October 2004, however the Regional Board was not notified at that time and a communications report was not submitted. Staff recognizes that at that time there was uncertainty about the proper response to algae toxicity (due to lack of lab understanding about TIE procedures for algae) and that the September and October sampling event occurred before the rice MRP was signed on 18 November 2004.

Another issue regarding toxicity is in regards to the CRC's toxicity trigger. Staff recognizes that the CRC's toxicity trigger for re-sampling and conducting a TIE varies from the other Coalition groups. Based on the ambiguous trigger language in the CRC's QAPP, during the 2004 monitoring the CRC interpretation was that if toxicity was found in the initial sample, there was a re-sample and a TIE was conducted (if triggered) on the resample. Since the QAPP toxicity trigger language was confusing in regards to the trigger, staff set up a June 9th 2005 meeting at which the CRC was notified and agreed to collect enough sample during each scheduled sampling event so that TIEs could be run off of the initial sample (if triggered). From henceforth, the CRC has agreed to conduct TIEs on the initial sample (if

triggered). At the June meeting, staff provided additional clarification that a TIE is not required on the resample, if it was already conducted on the first sample taken.

Since 2004, the CRC has submitted several communications reports, and has conducted follow-up sampling and a TIE, when exceedances occurred. For 2005, the CRC has agreed to follow the rice MRP which states that the CRC is to notify staff "immediately" via email or fax if an exceedance occurs. To be in compliance, staff recommends that the CRC notify Regional Board staff no later than one day after the toxicity test ends (within the lab) so that follow-up sampling can be scheduled as soon as possible. Also as stated in the rice MRP, the written communications report (which includes the re-sampling date, if necessary) should then be submitted within one week of notification of the exceedance.

Recommendations

For 2005, in the CRC's AMR and in any communications reports submitted, the CRC shall strengthen discussion and interpretation of monitoring results. When any monitoring results indicate exceedances of water quality objectives the CRC needs to report exceedances immediately and submit communications report(s) within one week of notification. These communications reports should present the results documenting the exceedance and should include an in-depth investigation as to what may have caused the exceedance (including re-sampling for any water quality objective exceedances, TIEs for toxicity and consultation with appropriate agricultural commissioners) and what can be done to make sure that the exceedance is not repeated, such as developing management practices.

Overall the CRC did an excellent job of summarizing the first year's monitoring results. As the AMR represents a significant undertaking, staff fully recognizes the amount of work and attention to detail that went into the CRC's AMR.

Attachment: *Table 1 Summary of Water Quality Objective Exceedences as reported in the CRC's 2004 AMR*